

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Canceled)
8. (Canceled)
9. (Canceled)
10. (Canceled)
11. (Canceled)
12. (Canceled)

13. (Canceled)

14. (Canceled)

15. (Currently Amended) An electrochemical device comprising:

a first compartment comprising electroactive media that is substantially free of anion-exchange resin and is bounded by ~~first and second anion-selective membranes on each side thereof~~ a first anion-selective membrane and a second anion-selective membrane; and

a second compartment ~~disposed adjacent the first compartment, the second compartment~~ defined at least partially by ~~a first cation-selective membrane and~~ the first anion-selective membrane, ~~and~~ the second compartment comprising a first mixed bed of cation exchange resin and anion exchange resin;

a first depleting compartment disposed adjacent the second compartment, the first depleting compartment defined at least partially by the first cation-selective membrane and a third anion-selective membrane;

a concentrating compartment disposed adjacent the first depleting compartment, the concentrating compartment defined at least partially by the third anion-selective membrane;

a second depleting compartment disposed adjacent the first compartment, the second depleting compartment defined at least partially by the second anion-selective membrane and a second cation-selective membrane; and

a cathode compartment fluidly connected downstream from the first compartment.

16. (Currently Amended) An electrochemical device comprising:
a trapping compartment consisting essentially of cation-exchange resin ~~and anion-selective membranes and an electrode~~, a first anion-selective membrane, and a second anion-selective membrane;
a cathode compartment fluidly connected to an outlet of the trapping compartment; and
a first depleting compartment disposed between the trapping compartment and the cathode compartment.
17. (Canceled)
18. (Canceled)
19. (Canceled)
20. (Canceled)
21. (Canceled)
22. (Canceled)
23. (Canceled)
24. (Canceled)
25. (Canceled)
26. (Canceled)

27. (Canceled)

28. (Canceled)

29. (Canceled)

30. (Canceled)

31. (Currently Amended) A method of facilitating liquid treatment comprising providing an electrochemical device, comprising at least one compartment that is at least partially filled with cation-exchange resin and bounded by anion-selective membranes on each side thereof, a depleting compartment disposed adjacent a first side of the at least one compartment, and a concentrating compartment disposed adjacent a second side and opposite the first side of the at least one compartment; and

connecting a power supply to the electrochemical device, the power supply configured to provide a reversible electrical current to the electrochemical device.

32. (Currently Amended) A method of facilitating liquid treatment comprising providing an electrochemical device comprising a trapping compartment consisting essentially of cation-exchange resin and anion-selective membranes ~~and an electrode compartment~~; a depleting compartment disposed adjacent the trapping compartment; and a cathode compartment fluidly connected to an outlet of the trapping compartment, the cathode compartment in ionic communication with the trapping compartment through the depleting compartment.

33. (Canceled)

34. (Currently Amended) The electrochemical device of claim 15, ~~further comprising a depleting compartment defined at least partially by the second anion-selective membrane, the~~

~~depleting compartment comprising wherein the first depleting compartment comprises a second mixed bed of cation exchange resin and anion exchange resin.~~

35. (Canceled)

36. (New) The electrochemical device of claim 34, wherein the second depleting compartment comprises a third mixed bed of cation exchange resin and anion exchange resin.

37. (New) The device of claim 36, wherein the cathode compartment is in ionic communication with the first compartment through the second depleting compartment.

38. (New) The device of claim 15, wherein the first depleting compartment is fluidly connected downstream of a pressurized reservoir.

39. (New) The device of claim 38, wherein the pressurized reservoir is fluidly connected to at least one of a washing machine, a faucet serving to provide water to a kitchen sink, and a showerhead.

40. (New) The device of claim 39, wherein the pressurized reservoir comprises a vessel with a heating coil disposed to heat water in the vessel.

41. (New) The device of claim 16, further comprising:
a first concentrating compartment disposed adjacent the trapping compartment, the first concentrating compartment containing a mixture of cation exchange resin and anion exchange resin; and
a second depleting compartment disposed adjacent the first concentrating compartment, the second depleting compartment containing a second mixture of cation exchange resin and anion exchange resin.

42. (New) The method of claim 31, further comprising providing a controller configured to regulate operation of the power supply to provide the reversible electrical current to the electrochemical device that produces a treated liquid product having a conductivity in a range of from 150 $\mu\text{S/cm}$ to 300 $\mu\text{S/cm}$.
43. (New) The method of claim 32, further comprising providing a controller configured to regulate operation of the electrochemical device to provide a treated liquid product having a conductivity in a range of from 150 $\mu\text{S/cm}$ to 300 $\mu\text{S/cm}$.
44. (New) The method of claim 43, further comprising connecting a conductivity sensor to the controller.
45. (New) The method of claim 44, further comprising connecting the electrochemical device to a pressurizable reservoir.
46. (New) The method of claim 45, wherein connecting the conductivity sensor comprises installing the conductivity sensor on the pressurizable reservoir.